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ABSTRACT

A study of 6 low-achieving and 5 high-achieving minority-isolated elementary schools in San Diego, California, identified 28 factors that appeared to make a difference in achievement levels. Thirteen were associated with time-on-task, focus, and structure, i.e. variables within the schools' control. The remainder were miscellaneous background variables. Major findings were the following: (1) 88 percent of all identified weaknesses among the schools occurred in grades 4-6; (2) the language area accounted for about 60% of the identified weaknesses across both groups of schools, reading accounted for around 30%, and math for approximately 10%; (3) fewer parents were regularly involved with the schools at the lower-achieving schools; (4) variables related to principal supervision and monitoring activities seemed to be stronger at higher-achieving schools; and (5) the data indicated that the goal of achievement may conflict with the goal of integration. Following the narrative, recommendations are given for putting these findings to work in assessing school needs and in determining the course of future research. Materials used in collecting data, data by school, a cluster analysis of identified areas of weakness across schools, and a selected bibliography are appended. (KH)

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San Diego City Schools

EVALUATION SERVICES DEPARTMENT REPORT

ED252609

EFFECTIVE FACTORS OF STUDENT ACHIEVEMENT IN MINORITY-ISOLATED SCHOOLS

PRELIMINARY FINDINGS

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JANUARY 1983

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INTEGRATION & DISTRICT PROGRAMS UNIT

No. 345

Prepared for:
Superintendent
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EXECUTIVE SUMMARY

The purpose of the Effective Factors Study is to identify those factors in the 16 K-6 minority-isolated schools which may make a difference in terms of student performance on the Comprehensive Tests of Basic Skills (CTBS). The basic design of the study identified a group of high-performing schools and a group of low-performing schools based on several criteria related to performance over the past two years on the CTBS. This yielded five schools in the high group and six schools in the low group.

Evaluation Services staff, interacting with selected central office staff having experience with these schools, then generated a list of 58 factors which conceivably could be related to high or low performance. Evaluation Services staff then collected data available centrally and interviewed all of the principals of the 11 high and low schools, using an inquiry procedure built around 58 factors. Results of the interviews were then quantified and the subsequent array of information was averaged for each of the two groups.

The next step was to identify those factors among the 58 that appeared to indicate a difference between the high and low groups. Since much of the data was based on estimates and the unit of study was the school, the use of sophisticated statistical procedures was not appropriate. On the basis that the study was exploratory in nature with the aim of recognizing promising leads for further investigation, the final list of factors were simply those that, on their face value, appeared to suggest a difference between the two groups of schools. Altogether, 28 of the 58 factors were selected in this manner, falling roughly into two categories: 13 that were associated with time-on-task, focus and structure; and 15 that were miscellaneous background variables.

It is important to underscore a caution before summarizing the conclusions and

recommendations. The obtained differences do not justify cause-and-effect conclusions at this preliminary stage. They simply indicate a range of factors associated with performance. The association could be accidental, insignificant, the result of a condition over which the school has no control, or simply an association that has no causal implications. On the other hand, since the association also could be causally related, principals will have some preliminary information to help them further examine and possibly modify their programs and approaches, where appropriate. One further caution: when the analysis is redone later this year using spring, 1983, CTBS achievement results, it is possible that one or more of the schools among the high or low group will change its status, either dropping out of the selection range altogether, or moving from one group to the other. Such is the nature of schools and the factors associated with them.

Summary of the Findings and Conclusions

1. Thirteen factors with noticeable differences between the high and low schools are variables which are within the control of the school, variables associated with the structure, focus and time-on-task.
2. Using the technique of cluster analysis of spring 1982 test results to determine specific weaknesses within the areas of reading, language, and mathematics as measured by the CTBS, 88% of all identified weakness among the low group of schools occurred in grades 4, 5, and 6.
3. According to cluster analysis, the language area accounted for about 60% of all identified weaknesses across both groups of schools; reading accounted for around 30%; and math, approximately 10%.
4. Fewer parents are regularly involved with the schools in parent organizations at the lower-achieving schools.
5. Variables related to principal supervision/monitoring activities seem to be stronger at higher-achieving schools. This includes such factors as the

number of classroom visitations, the use of modified days for inservice and meetings, and the number of staff meetings.

6. Examination of charted individual school data shows some schools in the high group are similar to schools in the low group and vice versa. For some variables, one or more schools appear to be outliers, that is, they differ substantially from both groups.

7. There is some indication in the data that the goal of achievement may be in conflict with the goal of integration. For example, the percent of students leaving the low group of schools for VEEP is higher on the average than from the high group of schools. The reasons for this are not clear-cut and vary from the possibility that the higher-achieving students are leaving the low group to simply effective VEEP recruiting efforts, unrelated to student achievement level.

8. Many of the variables originally considered have been eliminated as either showing no differences between groups or as background factors over which the school has little or no control. While it is necessary to acknowledge that background factors outside the control of the school or district affect student achievement levels, it is necessary to concentrate on those variables which can affect achievement and are within the control of the school or district.

9. Factors present in combination with other and their interaction offer more promise than any single factor. Looking at an isolated factor increases the risk of false conclusions.

10. Most of the areas of noticeable differences between the higher-achieving group and the lower-achieving group are consistent with other large scale research studies on effective schools.

Summary of the Recommendations

1. Individual school data already provided to the eleven schools in the study should be used as *needs assessment* information and incorporated into school improvement planning.
2. The information in this stud, may be generally useful to other schools throughout the district.
3. It is important to look upon the information contained in this report as preliminary, with careful consideration of the cautions cited.
4. Results of cluster analysis should be examined by Curriculum and Programs Division to derive information to strengthen specific programs at particular grades.
5. During 1983-84, a design should be developed to refine and sharpen the focus of the study based on the information found and factors eliminated this year, and a more in-depth study should be conducted of the high and low schools, utilizing information from teachers, other appropriate staff, and observations in classrooms.
6. Investigate possible interaction patterns among the factors to gain better insight into which factors combine and what can be done to improve student achievement.

In conclusion, it is noteworthy that the findings on effective factors in San Diego's minority-isolated schools are generally in line with the findings reported in other studies across the nation. Thus far, there have been no surprises. Furthermore, it is proposed that the present investigation be continued for another two years to sort out any unstable variables to refine and sharpen the study's focus.

A NOTE OF SPECIAL THANKS

Special thanks are due to the eleven principals for their cordial cooperation and willingness to share data about their schools and for their interest in our study and in the preliminary results they've seen.

While we were searching for differences between high and low schools which would enable changes to be made to improve school effectiveness, it is important to keep a perspective on the quality of school personnel with whom we had contact. In all cases, we saw evidence of caring, concerned administrators expressing both their interest and their efforts to improve student achievement and improve their schools. They were organized, knowledgeable, and able to produce information requested of them.

Our purpose in this study was not to evaluate people nor do we have a need to protect and defend people. These comments are offered in the spirit of maintaining a perspective.

EFFECTIVE FACTORS OF STUDENT ACHIEVEMENT IN MINORITY-ISOLATED SCHOOLS

INTRODUCTION

Background of Study

Significant progress on CTBS scores has been reported to the Court for the first two years of effort in raising achievement in minority-isolated schools. By July, 1982, interim achievement goals had been met in 23 out of 30 areas.

Nevertheless, differences exist among schools. Some schools seem to have less difficulty meeting the interim goals; others, more difficulty. The Achievement Goals Program is based on the theory of mastery learning which assumes, among other things, that all students can learn. What, then, makes the difference? In Evaluation Services Department Report No. 315, "Testing Results for Minority Isolated Schools," dated July 20, 1982, it was recommended that:

> . . . an evaluation of the instructional practices at schools meeting higher degrees of achievement test success be contrasted with similar schools which are not obtaining improved test scores. This is frequently called a high-low study. The intent is to find "promising practices" which can be disseminated across schools.

The Integration and District Programs Unit in Evaluation Services proposed in Fall, 1982, to study the factors of achievement in several schools during 1982-83.

Purpose of Study

The purpose of this evaluation study is to identify factors which contribute to the successful achievement of students in the minority-isolated schools, particularly those factors which can be controlled, transferred to, and implemented in other schools to improve achievement. A second purpose is to identify factors which hinder achievement, and which are controllable, alterable,

or able to be eliminated so as not to further hinder achievement.

It is important to recognize that there will be other variables associated with student achievement over which the school has no control, or little or no influence, otherwise known as unalterable variables.

Criteria for Selection of Schools

The selection of schools was limited to elementary schools due to the small number of minority-isolated secondary schools.

The criteria to identify the schools were as follows:

1. The school did/did not meet its interim goals 1980-81.
2. The school did/did not meet its interim goals 1981-82.
3. Percent of students achieving at or above median percentile 1980-81 in reading, math and language.
4. Percent of students achieving at or above median percentile 1981-82 in reading, math and language.
5. Decline in percent of students at or above median from 1980-81 to 1981-82.
6. Achievement in percentiles.

Schools were rank-ordered according to these criteria. Grades 2-6 were ranked separately for each of three curricular areas: reading, language and math. Then the schools which appeared most frequently in the top four or bottom four on the lists were included in the respective group of higher-performing (*high*) or lower-performing *(low)* schools. There were five schools in the high group and a tie put six schools in the low group.

Process Followed in Study

The process followed by Evaluation Services in conducting this study is outlined briefly below:

1. Analysis of two years of CTBS test data (1980-81 and 1981-82) and of progress toward Court achievement goals as discussed in Report No. 315 and as provided by Evaluation Services.
2. Determination of selection criteria for the high group of schools and for the low group of schools among the 23 minority-isolated schools.
3. Use of criteria to select five schools in each group. A tie put six schools in the low group. All schools were AGP schools with the exception of one in each group.
4. Discussion of the potential study and its purpose with appropriate groups: Executive Council (now the Interim Cabinet), Integration Planning Committee, and Evaluation Committee (the President and Vice-President of the Board of Education and the Acting Superintendent).
5. Development of list of factors to be considered. Discussion with a director from Elementary Division expanded the list.
6. Collection of all data from the list which was available centrally.
7. Development of an interview form for the school principal.
8. Scheduling and conducting interviews with all eleven principals at their schools. In some instances, the principal chose to include others in the interview. Usually, these people were vice-principals and/or resource teachers.
9. Determination of means (averages) across schools in the high group and across schools in the low group where appropriate. Listing of those factors and the means for which there appeared to be a difference

between the high group and the low group.

10. Sophisticated statistical techniques were not used to examine the data due to the following: the unit of study was the school, resulting in a small sample size; the data involved many estimates; and this is an exploratory study to identify promising leads rather than to put specific research hypotheses to the test.

    The analysis therefore is based on a logical assessment which is tentative and will require further study.

11. Separation of the list of factors which might show a difference between high and low achieving schools. Charting of the preliminary data by individual and by interacting factors and determination of recommendations for further steps. Interacting factors are those which, by themselves, might not make a difference, but which in combination with other factors, could show a difference in effectiveness.

12. Discussion of the factors which show some differences and possible differential interacting factors with principals in study and appropriate high-level district administrators.

13. Presentation of these preliminary findings to the Superintendent and Board of Education.

Cautions in the Interpretation of Data

While throughout the report there is discussion about the meaning of the data and its application to improve student achievement, care must be taken not to jump to premature conclusions. A number of cautions must be underscored in examining the data to follow:

1. Do not assume a cause and effect relationship between the factors and the achievement of their associated schools. This relationship may be the result of the other variables acting singly or in combination.

2. Care should be taken in the interpretation of means and percentages since they are based on a small sample of schools. For example, 40% of five schools is two schools while 67% of six schools is four schools, a difference of only two schools.
3. Many of the numbers were estimates. For example, the principal interviewed may not have known exactly what percent of aide time is used for paperwork and preparation of materials or precisely how much homework is assigned.
4. The data are limited to two years. It remains to be seen what the test results will be for the spring of 1983 and whether or not the same schools will reappear in their respective high or low grouping.

FACTORS CONSIDERED

From discussion with many interested persons including district administrators and board members, a list of factors was generated. The initial list expanded as the study progressed. Initially, it was felt that some of the factors would not yield data that differentiated between high and low schools, but it was considered worth the effort to investigate as many as possible so as to have available a large pool of factors to consider. A total of 58 factors were identified in addition to open-ended questions and comments from the principal interviews. A list of the factors follows in Table I. This table shows an abbreviated description of the factor studied in the left column, the source of information, the range of responses across all eleven schools, and a mean of the responses from the group of high and the group of low schools.

Some of the factors which did not lend themselves to charting by range or mean are simply listed with the source of data given, but with no range or mean. The interested reader is referred to a more extensive listing in Appendix C, which shows the distribution of schools in a continuum and charts all factors.

In the interest of brevity, each factor is not discussed separately. It is hoped that most are apparent from the description given and that the reader can refer to the principal's interview (Appendix B) to find the exact question asked. Factors 50-54 are from California Assessment Program data on Grade 3 and are used as confirming data. In other words, the information was gathered in a different way and at a different time for CAP but confirms or is consistent with other data for these schools.

TABLE I
ELEMENTARY MINORITY-ISOLATED SCHOOLS
LIST OF FACTORS CONSIDERED

	Description of Factors	Source of Information	Range			High	Low
1.	Percent minority	CD	52.6 - 96.3		*	76.6	93.5
2.	Percent minority composition (Hispanic, White, Black, Asian, Alaskan/Indian)	CD					
3.	Mobility index	CD	38.9 - 73.4		*	47.1	60.1
4.	Enrollment (1981-1982)	CD	362 -1075			565.2	669.3
5.	Programs at school (AGP, DISTAR, VEEP, Magnet, Title I, Learning Center, SIP, Exchange Program, Bilingual, Pre-Kindergarten, ESAA, Special Education, Follow Through, Gifted, Miller-Unruh)	CD/PI					
6.	Percent resident	CD	56.5 - 100.0		*	80.7	95.3
7.	Percent non-resident	CD	0 - 43.4		*	19.3	4.7
8.	Percent of schools with year-round (vs. traditional) schedule	CD				0	66.7
9.	Total hours of instruction per school	PI	5.0 - 6.1			5.3	5.4
10.	Percent of schools with extended instructional day	PI				80.0	83.3
11.	Percent of teachers who spend instructional time over AGP requirements for Reading, Language, and Math	PI	Reading Language Math	0 - 60 0 - 100 0 - 100	*	5.6 6.3 0	20.2 30.1 30.1
12.	Minutes per day for sustained silent reading	PI	10 - 30			20.0	20.0

CD Data available centrally (Ed Center)
PI Interview with Principal of School (In several cases, Resource Teachers also present in interview)
W Written material provided by school
* Denotes a weighted mean

TABLE I
ELEMENTARY MINORITY-ISOLATED SCHOOLS
LIST OF FACTORS CONSIDERED

	Description of Factors	Source of Information	Range	High	Low
13.	Percent of schools with pullout programs	PI		100.0	100.0
14.	Maximum amount of time per day/per week for pullout program		per day 0 - 180 min. per week 0 - 900 min.	68 min. 352 min.	43 min 210 min
15.	Percent of schools with policy of non-interruptions to class	PI		100.0	83.3
16.	Percent of schools with tutorial programs (after school, peer tutoring, cross-age tutoring)	PI		0	0
17.	Breakfast program (percent of students)	PI	15.4 - 62.5 *	42.0	49.9
18.	Frequency of assemblies (number per quarter)	PI	1 - 14	4.2	4.0
19.	Traffic patrol (time out of class per week per student)	PI	15 - 35 min.	30 min.	22 min
20.	Other programs that involve students outside of regular instruction (office monitors, lunch workers, etc.)	PI			
21.	Maximum amount of time out of class for Items # 19 and # 20	PI	0 - 100 min.	50 min.	25 min.
22.	Percent of schools which participate in Balboa Park Program	PI		100.0	100.0
23.	Percent of schools that indicated adherence to "time on task" instructional principles	PI		100.0	100.0

CD Data available centrally (Ed Center)
PI Interview with Principal of School (In several cases, Resource Teachers also present in interview)
W Written material provided by school
* Denotes a weighted mean

TABLE I
ELEMENTARY MINORITY-ISOLATED SCHOOLS
LIST OF FACTORS CONSIDERED

	Description of Factors	Source of Information	Range		High	Low
24.	Percent of students riding the bus	PI		0 - 41 *	18.0	5.5
25.	Time lost per week due to transportation problems	PI		0 - 60 min.	15.5 min.	9.4 min.
26.	Percent of schools with homework policy	PI/W			100.0	100.0
27.	Days per week for homework	PI		2 - 4	3.4	3.0
28.	Number of visitations (formal and informal) by principal to each class per year	PI	Formal Informal	3 - 25 0 - 150	6.7 51.7	9.5 40.8
29.	Percent of teachers who have aides at least two hours per day	PI			100.0	100.0
30.	Use of classroom aides (percent of time for teaching, percent of time for review/ reinforcement, percent of time for paper work/preparation of materials)	PI	Teaching Review Preparation	0 - 60 30 - 90 10 - 50	7.0 73.4 19.6	18.3 49.6 32.1
31.	Percent of schools indicating that classroom aides are given on-site training (also length and content of inservice)	PI			100.0	100.0
32.	Number of teacher inservice hours per year	PI		20 - 70	34.0	33.1
33.	Use of modified days (percent for inservice, percent for administrative matters, percent for teacher preparation)	PI	Inservice Administrative Preparation	10 - 75 0 - 25 10 - 90	48.0 12.2 39.8	44.2 7.0 48.8
34.	Frequency of staff meetings (number per month)	PI		1 - 4	2.5	1.6

CD Data available centrally (Ed Center)
PI Interview with Principal of School (In several cases, Resource Teachers also present in interview)
W Written material provided by school
* Denotes a weighted mean

TABLE I
ELEMENTARY MINORITY-ISOLATED SCHOOLS
LIST OF FACTORS CONSIDERED

	Description of Factors	Source of Information	Range	High	Low
35.	Percent of schools which had an agenda for staff meetings	PI/W		100.0	100.0
36.	Given demands for teaching basic skills, how do teachers manage to teach other subjects	PI	Percent using afternoons Percent using learning centers	100.0 40.0	50.0 50.0
37.	Time given to science, art, music, physical education, etc. (minutes per week)	PI	120 - 450 min.	227.0	257.5
38.	External resources used at school sites (university, parent tutors, business, and community)	PI			
39.	Parent organizations at school and number of parents regularly involved (SSC, SAC, PTA)	PI	8 - 45	29.6	17.7
40.	Percent of schools with counseling center	PI		100.0	83.3
41.	Percent of principals who described school's educational goals; percent of schools which provided a copy of school plan	PI/W	Goals related to district goals Goals related to basic skills Copy of school plan provided	20.0 40.0 80.0	16.7 66.7 83.3
42.	Percent of LEP students		1.6 - 44.1 *	15.5	30.9
43.	Percent of LEP students on waiver	PI	1 - 68.8 *	24.9	36.2
44.	Number of teacher assignments changed and number of classrooms affected	PI	0 - 6 0 - 16	2.2 5.2	3.0 5.5
45.	Average class size	PI	29 - 32	30.6	30.2
46.	Percent of traditional classrooms; open classrooms; multi-graded classrooms; team taught classrooms	PI	Traditional 0 - 88 Multi-graded 12 - 100 Team taught 12 - 22	61.6 31.6 6.8	63.0 37.0 0

CD Data available centrally (Ed Center)
PI Interview with Principal of School (In several cases, Resource Teachers also present in interview)
W Written material provided by school
* Denotes a weighted mean

TABLE I
ELEMENTARY MINORITY-ISOLATED SCHOOLS
LIST OF FACTORS CONSIDERED

Description of Factors	Source of Information	Range	High	Low
47. Percent of minority teachers	PI	14.3 - 45.8 *	21.4	29.5
48. Mean number of years of seniority for teachers at school	CD	5.1 - 12.2 *	8.2	7.3
49. Mean salary classification of teachers	CD	C.3 - E.4 *	D.3	D.0
50. Percent of AFDC (CAP data, grade 3)	CD	22.0 - 37.0 *	28.5	30.8
51. Percent of LEP/NEP (CAP data, grade 3)	CD	0 - 63.9 *	13.7	31.4
52. Scale Score - Reading (CAP data, grade 3)	CD	183 - 302 *	233.8	206.8
53. Scale Score - Writing (CAP data, grade 3)	CD	186 - 318 *	240.9	206.4
54. Scale Score - Mathematics (CAP data, grade 3)	CD	187 - 283 *	247.9	218.7
55. Percent of students electing to leave local school for VEEP program	CD	0.3 - 26.76 *	7.8	15.3
56. Number of years principal has been assigned to school site	CD	1 - 9	3.6	3.0
57. Percent of students scoring at or below Quartile 1 and at or below Quartile 2 on CTBS	CD			
58. Percent of students in magnet program	CD	0 - 100 *	60.3	27.6

CD Data available centrally (Ed Center)
PI Interview with Principal of School (In several cases, Resource Teachers also present in interview)
W Written material provided by school
* Denotes a weighted mean

CLUSTER ANALYSIS

In addition to the selection criteria for the high and low schools based on the CTBS total scores for reading, language, and mathematics, Evaluation Services provided cluster analysis results for the schools in this study. This is a technique which combines all of the CTBS test items measuring a common objective, computes their average p-value (percent of students passing these items), converts this to a quotient by dividing it by the publisher's p-value, and identifies as weaknesses those which fall below a predetermined level. This allows a more focused comparison between high and low schools in terms of specific weaknesses as registered on the CTBS. While individual schools have their own cluster analysis results and have been working with these since last fall, the group data may be of help in recognizing broad patterns that could benefit curriculum writers revising instructional materials.

For purposes of the group analysis, a weakness in the high group had to appear in at least three of the five schools to count, and for the low schools a weakness had to appear in at least five of the six schools, except at Grade 1 where a standard of four out of six was used. These arbitrary standards were used as a practical matter to generate a manageable number of weaknesses for both groups--neither too few to be helpful nor too many to provide focus. Again, the individual schools have their own complete sets of cluster analyses to allow them as much specificity as they wish in planning program improvement.

Looking at patterns of weakness for the high and low groups (See Table II), the following generalizations can be made:

1. For both the high and low groups the largest number of weaknesses appeared at Grade 5.

2. For the high group, Grades 3, 5, and 6 accounted for nearly all the identified weaknesses, though these were few in number.

3. For the low group, Grades 4, 5, and 6 accounted for the vast majority of weaknesses.

4. For both high and low groups the language area accounted for about 60% of the total number of identified weaknesses; the reading area, approximately 30%; and mathematics, around 10%.

5. In general, the students did as well as or better than the national comparison group on easier items. On the more difficult items the students tended to fall below the national standard.

6. Among the low group, especially at Grade 5, there were three predominant areas of weakness: the writing techniques cluster of the reading comprehension subtest and both the punctuation and capitalization clusters in the language mechanics subtest.

7. At Grade 5, in those relatively few areas where the high group had weaknesses, the low group did also.

8. Occasionally, there were paradoxical findings. For example, at Grade 3 in four of the six areas where the high group did poorly, the low group did well.

TABLE II

SUMMARY OF IDENTIFIED AREAS OF WEAKNESS
ACROSS HIGH AND LOW GROUPS
BASED ON CLUSTER ANALYSIS*

GRADE	HIGH GROUP				LOW GROUP			
	Reading	Language	Math	Totals	Reading	Language	Math	Totals
1	-	-	-	0	1	2	-	3
2	-	-	-	0	2	5	-	7
3	1	3	2	6	-	3	3	6
4	-	-	1	1	8	25	3	36
5	5	5	-	10	19	34	6	59
6	-	4	-	4	8	14	2	24
TOTALS	6	12	3	21	38	83	14	135

*See Appendix D

COMMENTS FROM THE PRINCIPAL'S INTERVIEW

As stated earlier, the principal's interview form was developed to collect information not available through central documentation. Centrally available data reflect the 1981-82 school year, and Table I shows source of data. The principal interviews were conducted in October and November of 1982, and the data reported reflect conditions at that time. For example, questions about changes in classroom assignment are included to see the extent of changes necessitated by changes in enrollment which affect staffing formulas. This question is generally resolved by January. As it turns out, the reorganization of classes within schools did not appear to be a factor differentiating between the high and low groups. Another example is the Chapter 2 Supplementary Program, which was not in effect in the fall, therefore not reflected in data collections. It may, however, be in the reader's mind now. These temporal examples are used to set the stage for the reader as to time frame of data collection. It also points out the necessity, in a study such as this, to be aware of changes that occur during a year and from year to year.

In reviewing the preliminary data with principals, several changes were pointed out. Where changes represent phenomena occurring since November, the change will not be shown in the charted data. All efforts were made, however, to check carefully the accuracy of the data as collected in the fall interviews. It is necessary to note that the interviewers pressed the principals on some questions to estimate responses for which an exact percentage would be difficult to determine without keeping detailed logs, and this would interfere with the job an employee is to perform. For example, on questions as to percent of time spent in certain activities, the reader should recognize these responses as estimates, as indicators of whether further study is needed, not as absolute percentages.

The last question on the principal's interview was an open-ended one: "What else is unique to your school site that we have not mentioned or that you feel is

important for us to understand about your school?"

Several principals mentioned a strong and conscientious staff, a strong discipline program, community support by the parents for both the school program and the discipline program.

On the negative side, some principals mentioned the high mobility which they experienced with students and the difficulties of contacting and keeping close communication with parents, particularly those parents who are not English-speaking and/or those who feel uncomfortable coming to the school. Also, staff turnover and Learning Centers were cited as taking time away from AGP instruction.

While open-ended questions are a good way to obtain information during an interview, unfortunately the responses to this question may have been biased. Generally speaking, principals were aware that they were either a high or a low school. The principals at schools in the high group often responded with reasons to support their school being in that group and noted very positive things. The principals at schools in the low group tended to respond with reasons why the test scores might be low.

FACTORS WHICH SHOW NOTICEABLE DIFFERENCES AND MIGHT REQUIRE FURTHER STUDY

From the 58 variables originally considered, Table III shows 28 factors on which there was a noticeable difference between the means for the high schools and means for the low schools. Thirteen of these 28 variables were considered to be associated with the structure or focus of the instructional program of the school or as having an effect on time-on-task instructional principles in classrooms. The remaining 15 variables were considered to be background variables, most of which are not within the control of the school.

In examining Table III, it is of the utmost importance to underscore the caution not to jump to conclusions about the lineup of factors with the high or low groups. For example, item 12, the percent of schools with DISTAR programs, indicates that they most often appear among the low schools. It would be incorrect to conclude, based on this fact alone, that DISTAR is ineffective. On the contrary, based on other evidence, it is about as effective as AGP in improving achievement. What causes it to occur in the low column is the fact that Follow-Through DISTAR programs are required to serve the students in greatest need, therefore those with the lowest test scores.

Table III shows an abbreviated description of the factors studied in the left column and means of the responses from the groups of high and low schools, respectively, in the right columns. The apparent differences which exist between the groups of high and low schools on each of these factors suggest the possibility of further in-depth study and analysis focusing on them.

TABLE III

ELEMENTARY MINORITY-ISOLATED SCHOOLS

EFFECTIVE FACTORS STUDY

Factors Which May Require Further Study

			High	Low
VARIABLES ASSOCIATED WITH STRUCTURE, FOCUS, TIME-ON-TASK	1. Percent of schools which participate in a learning center program		40.0	66.7
	2. Mean number of days of homework assigned per week		3.4	3.0
	3. Mean number of informal class visitations reported by principal per class per year		51.7	40.8
	4. Percent of aide time used in review/reinforcement and paperwork/preparation of materials for teacher (as opposed to time in teaching activities)	Review Paperwork	73.4 19.6	49.6 32.1
	5. Percent of schools where principal identified the use of resource teachers in on-site training of classroom aides		80.0	16.7
	6. Percent of schools where principal indicated that aides are monitored by classroom teachers		40.0	0
	7. Percent of schools where principal identified familiarization with district and school procedures as a part of aide training		20.0	66.7
	8. Percent of modified days used for teacher preparation time (as opposed to inservice and administrative matters)		39.8	48.8
	9. Mean time spent on subjects other than Reading, Language and Math; Art, Science, Social Studies, PE, etc. (minutes/week)		227.0	257.5
	10. Mean number of staff meetings per month		2.5	1.6
	11. Maximum amount of time per day/per week for pullout program(s)		68 min/ 352 min.	43 min/ 210 min.
	12. Percent of schools with Distar program		20.0	66.7
	13. Percent of teachers who spend instructional time over AGP requirements for Reading, Language, and Math	Reading Language Math	5.6 6.3 0	20.2 30.1 30.1
MISCELLANEOUS BACKGROUND VARIABLES	14. Percent minority (weighted mean)		76.6	93.5
	15. Mobility index (weighted mean)		47.1	60.1
	16. Enrollment		565.2	669.3
	17. Percent of schools on year-round schedule		0	66.7
	18. Percent of schools with magnet program		80.0	33.3
	19. Percent of students in magnet programs (weighted mean)		60.3	27.6

TABLE III

ELEMENTARY MINORITY-ISOLATED SCHOOLS

EFFECTIVE FACTORS STUDY

Factors Which May Require Further Study

(Continued)

		High	Low
MISCELLANEOUS BACKGROUND VARIABLES	20. Percent resident population (weighted mean)	80.7	95.3
	21. Percent of students riding bus (weighted mean)	18.0	5.5
	22. Mean salary classification, indicating level of education (weighted mean)	D.3*	D.0
	23. Mean number of years of seniority (weighted mean)	8.2	7.3
	24. Percent of LEP students (weighted mean)	15.5	30.9
	25. Percent of LEP students on waiver (weighted mean)	24.9	36.2
	26. Percent of minority teachers (weighted mean)	21.4	29.5
	27. Percent of students leaving for VEEP** at another school (weighted mean)	2.8	15.3
	28. Mean number of parents actively involved in parent organizations	29.6	17.7

* D refers to a level of B.A. degree +60 or B.A. +54 with M.A. degree.

** Taken from preliminary report of 11/20/82. Official report is expected 2/83.

POSSIBLE INTERACTING OR COMBINING FACTORS

"Major elements for success are interrelated variables that have debilitatory effects if not on balance and synergistic consequences if operating in harmony."

Phi Delta Kappan Study of Exceptional Urban Schools

Interacting factors are those which by themselves, may not make a difference, but which in combination with other factors could impact school performance. Examination of the factors which may require further study in Table II did not appear at this point to single out any one factor as having an overriding effect on the performance of either the high or low schools. However, the following discussion of several groups of interacting factors may provide some useful insights.

FACTORS	DISCUSSION
Magnet Program Community Support Strong parent supported discipline code Mobility within community	1. In schools with a magnet program the parents, students and teachers select or are selected to be there. Principals identify community support as a positive factor and identify a strong discipline code supported by parents as a positive contributor to student achievement. This applies to the schools in the high group. In contrast, schools in the low group had fewer magnet programs, higher mobility, less parent participation. Principals less frequently mentioned community support and strong discipline codes (supported by parents) as factors in their school.
Staff Meetings Use of Modified Days Informal Visitations	2. These three factors relate to the degree of structure and control imposed by principal. Factors under this label include more staff meetings per month, percent of modified days used for structured teacher inservice and/or school meetings, and more informal class visitations reported by principals of schools in the high group.
Year-Round Schedule Mobility	3. More schools in the low group are on a year-round schedule. This by itself may not be important, but taken in combination with the following may have some merit for consideration. The low group of schools also have a higher index of mobility. If students are spending the summer in another area or with relatives or friends, they may miss up to a quarter of the school year. Some students enroll in

FACTORS	DISCUSSION
	the year-round school when it opens in the summer because parents are working and the child is cared for by the school. Then, when the neighborhood traditional school opens in September, the child is transferred back to that school. There are two effects: one, the child has five quarters of school during the year; and two, the child is enrolled in the traditional school when the CTBS is given and test scores reported.
Homework Time spent on subjects other thar on Reading, Language and Math Use of Aide Time	4. These are factors which relate to classroom or instructional day schedule and "time-on-task." This category includes such factors as: slightly more homework is assigned at the schools in the high group, somewhat more time is reportedly spent on subjects other than Reading, Language and Math, and more aide time is spent in teaching and review/reinforcement activities at the schools in the high group.
Mobility LEP Students	5. A high mobility index may interact with a high number of limited English proficient students to the extent that there may be a consistent flow of students with limited English skills into the school over the year. Before any conclusions are drawn, it would need to be known how LEP students who have been at the school for a relatively long period of time achieve compared to other LEP students at the school.

OTHER STUDIES OF SCHOOL EFFECTIVENESS

There have been many studies of school effectiveness with some fairly consistent results in recent years which allow schools and districts to apply research in efforts to improve schools. A selected bibliography is included in this report as Appendix E. A few summary highlights are discussed here to give the reader a brief overview and to introduce some comparisons of consistent and inconsistent results of this study in its preliminary stage with similar studies conducted in the state of California and elsewhere.

The National School Public Relations Association study (NSPRA), (1981) found that four factors contributed to successful schools:

Strong administrative leadership
High expectations for students and teachers
Positive climate
Community support

Very similar results were quoted in Edmonds (1979) about a study by Weber in 1971, which found that the four criteria of successful reading achievement in four inner city schools were:

Strong leadership by the principal
High expectations for all students
Orderly, quiet and pleasant atmosphere
Strong emphasis on reading skills and
frequent evaluation of student progress

Brookover and Erickson (1969) also emphasized that parent and teacher expectations were very important. It is noteworthy that high expectations is one of the cornerstones of San Diego's Achievement Goals Program, found in 9 of the 11 schools included in the present report.

The New York study, "School Factors Related to Learning," (1976) found that the percent of teachers having thirty or more hours beyond a B.A. degree has a significant relationship to student achievement. For San Diego City Schools, the mean sal-

ary classification, reflecting level of education, for the low group was Class D (B.A. + 60 units or B.A. + 54 units with M.A.), and for the high group, slightly above Class D.) The New York study results also indicated less concern for the medium of instruction, but said that the sequencing and organization are very important.

Conclusions of the Phi Delta Kappa study of Exceptional Urban Schools (1981) included the following:

1. School improvement efforts are more likely to be successful if they concentrate on relatively narrow targets and clearly-defined goals.

2. School improvement efforts are more likely to succeed if they involve multiple tactics to attain the goals.

3. School improvement efforts in urban elementary schools should place the thrust of the intervention closest to the point of effective action. Principals affect teachers; teachers affect students.

4. Successful urban schools and programs are characterized by high levels of parental contact with the schools and parental involvement with school activities.

In the San Diego study, there was a difference between the amount of parent involvement via regular participation in parent organizations--PTA, SSC, SAC, etc.--and principals at schools in the high group commented appreciably on the parent and community support for their academic and discipline programs. Some principals at low schools commented on the difficulty of getting parents involved with the school.

5. Successful schools and programs frequently utilize staff development or inservice training programs to realize their objectives.

In the San Diego study, there was a somewhat greater use of modified day schedules for inservice activities in the high group. The inservice and training of aides in the high group was more often conducted by resource teachers. There was more emphasis on district and school procedures in the training at low schools.

6. Successful schools and programs are often supported with special project funds from federal, state, and local sources.

Although funding was not a part of the San Diego study, a look at the programs at the schools would indicate funding of special projects, including Chapter I, SI, ESAA, magnet, and other programs which would have special funding sources. Many of these programs exist at several schools and this factor does not differentiate between the high and the low groups.

From Michael Rutter et al, (1979), comes the following: "Students experience better academic success where homework is regularly set and marked and where teachers expect students to do well on examinations."

In the San Diego Study, slightly more homework is assigned at schools in the high group.

Ronald Edmonds, (1981) indicates that the adults in effective schools are consistent in the statement and implementation of instructional goals.

John Goodlad, (1979) says that "the principal is the key. . . in creating a sense of mission for an effective school."

In the San Diego Study, principals primarily articulated goals of basic skills. Four out of six (low) and two out of five (high) referred to Basic Skills or Reading, Language and Math. Two in the high group and one in the low referred the interviewer to district goals or a written school plan.

Edward Wynne, (1981) says that "in good schools, supervisors believe classroom discipline is essential to learning. Rules are clear and penalties consistent and judiciously applied. Rules are uniformly enforced by all staff and periodically reviewed."

In the San Diego Study, three of five principals at the schools in the high group mentioned a good or strong discipline code or a "community supported" discipline code. Since the information came voluntarily in response to an open-ended question, it is unfair to conclude that only these three schools have a strong discipline system.

A report by the Colorado Department of Education (1982), indicates the importance of a strong program of parent support and participation in the school. In the San Diego Study, more parental support and participation was reported in the higher achieving schools.

A high-low study which will be discussed in more detail is the California School Effectiveness Study (1974-75). It is of more interest because it was conducted in California and some schools in close proximity to San Diego were included. It is also of interest because, even at this preliminary stage in the San Diego study, some results have been found that are consistent with the California School Effectiveness Study (CSES), along with one that is contrary. It must be kept in mind that San Diego's sample is smaller and its methodology is different. Nevertheless, certain comparisons will be of interest.

In CSES, regression equations were run each of two years to insure consistency of performance of the schools identified for the study. Predictor variables included an index of socioeconomic status, the percentage enrollment of each of the five racial-ethnic categories, level of urbanism, and percentage of minority enrollment. In the State's use of the regression equations, it was found that, in general, student achievement was positively related to socioeconomic status and negatively related to both bilingualism and total percentage minority enrollment. The results in San Diego's study show a corresponding negative relationship between student achievement and language proficiency in languages other than English.

In examining the findings in the CSES, the following observations were consistent with the San Diego study:

Teachers at higher performing schools in the CSES were somewhat older, having a slight edge in years of teaching experience. The San Diego study collected no information about teacher age, but teachers in the high group had, on the average, one more year of district seniority than teachers in the low group. Moreover, according to salary classification which indicates level of education beyond a B.A., the teachers in the high group had slightly more education than those in the low group.

The CSES found more district influence in curriculum and teacher hiring among the higher schools in the statewide study. By comparison, in the San Diego study

there was more district influence over curriculum in the higher group since it included more magnet programs. On the other hand, there would be about equal amounts of district influence in those schools having the Achievement Goals Program, and these occurred in both high and low schools. It also should be noted that the magnet schools in San Diego had more influence over the teacher selection process. Since four of the five schools in the high group had magnet programs, and only two of the six schools in the low group were so constituted, this may be worth closer examination.

In the CSES, teachers in the more effective schools reported spending slightly more time in classroom instruction on social studies and less on mathematics. In the San Diego study, using schedules given them by teachers, the principals reported approximately thirty minutes more time spent teaching social studies, science, health, physical education, art and music (combined) in the low group than reported by the principals in the high group. This time difference included the time spent in Learning Center programs.

One additional finding in the CSES investigation was inconsistent with San Diego's study. In CSES, teachers in the higher performing schools used aides for more non-instructional activities and the handling of paperwork. In the San Diego study, teachers in the high group used aides more often to assist with instructional activities, including review and reinforcement functions. Certainly in the case of the Achievement Goals Program, materials are provided to the schools, making it practical to use the aides in this manner.

One last word on research on effective schools comes from Edmonds (1982). "Finally, it is important to note that most changes will occur within a school but some important and desirable changes can only be made by the school board or the superintendent. Local school designs for school improvement will from time to time reveal aspects of board policy or administrative rules that impede the plan. It is important at such times to continue the local school plan while acknowledging that district-

wide changes may not occur or may take a long time to accomplish. Thus no local school design should depend on changes over which the local school does not have control."

An example in the San Diego Study which affects the control of the school is the conflict expressed by principals between the goals for integration and goals for achievement. At times, they wonder which has priority to the Court and to the Board.

He continues: "The research on the characteristics of effective schools has not yet shown some characteristics to be more important than others. Thus designs for school improvement must attend to all of the characteristics. It must be made clear that the need for change is school wide and includes both principals and teachers. All programs of school improvement should be evaluated on at least two distinctive measures. Changes in student achievement are an obvious important measure. Of equal importance are observable changes in the institutional, organizational nature of a school as a function of changes in principal and teacher behavior. Formative evaluation is to be distinctly preferred over summative evaluation."

FINDINGS AND CONCLUSIONS

1. Thirteen factors with *noticeable* differences between the high and low schools are variables which are within the control of the school, variables associated with the structure, focus and time-on-task.

2. Cluster Analysis provides insight into areas of weakness at higher and lower achieving schools as a group by subject areas and by grade levels. The upper grades (4-6) account for 88% of all identified weaknesses at the lower-achieving schools.

3. According to Cluster Analysis, language area accounted for about 60% of identified weaknesses at the high and low groups; reading accounted for around 30%; math, approximately 10%.

4. Fewer parents are regularly involved with the schools in parent organizations at the lower-achieving schools.

5. Variables related to principal supervision/monitoring activities seem to be stronger at higher-achieving schools. This includes such factors as the number of classroom visitations, the use of modified days for inservice and meetings, and the number of staff meetings.

6. Examination of charted individual school data shows some schools in the high group are similar to schools in the low group and vice versa. For some variables, one or more schools appear to be outliers, that is, they differ substantially from both groups.

7. A possible conflict between student achievement goals and integration goals may appear in some of the data. For example, the percent of students leaving the lower-achieving schools for VEEP is higher on the average than from the higher-achieving schools.

There are at least 3 possible reasons for this phenomenon. For example:

1. Higher-achieving students leave the school; thereby resulting in lower schoolwide test scores;
2. Students leave the school due to parent and/or student perception that the school has an inferior program; or
3. VSEP recruiting efforts are accomplishing varying levels of success.

If it is assumed that students leave the school due to its program, and punitive action were then taken against the school, it would, in effect, punish the school for not performing as well on one goal (achievement) while being more successful than others on another high priority goal (integration).

8. Many of the variables originally considered, have been eliminated as either showing no differences between groups or as background factors over which the school has little or no control. While it is necessary to acknowledge that background factors outside the control of the school or district affect student achievement levels, it is necessary to concentrate on those variables which can affect achievement and are within the control of the school or district.

9. Factors present in combination with others and their interaction offer more promise than any single factor. Looking at an isolated factor increases the danger of false conclusions.

10. Most of the areas of noticeable differences between the higher-achieving group and the lower-achieving group are consistent with other larger scale research studies on effective schools.

RECOMMENDATIONS

1. Individual school data, which has been shared with the schools in the study, can be used as *needs assessment* information and incorporated into school improvement planning. Schools that find themselves "outliers" in an undesirable direction can make changes on specific practices.

   Other schools "in the middle" between the high and low, but in the minority-isolated group of schools may also find the data useful in program planning and improvement.

2. This study should be treated as preliminary data, with careful review of the cautions section. No major districtwide changes should be made on any single factor alone.

3. Results of cluster analysis should be further examined by Curriculum and Programs Division to derive information to strengthen specific programs at particular grades.

4. During the summer of 1983, the 1982-83 CTBS results should be examined, using the same criteria to determine high/low status of those schools and the implication of any changes.

5. During 1983-84, a design should be developed to refine and sharpen the focus of the study based on the information found and factors eliminated this year, and a more in-depth study should be conducted of the high and low schools, utilizing information from teachers, other appropriate staff, and observations in classrooms.

6. Investigate possible interaction patterns among the factors to gain better insight into which factors combine and what can be done to improve student achievement.

APPENDIX A

SAN DIEGO CITY SCHOOLS

EDUCATION CENTER | 4100 Normal Street

DATE: October 12, 1982

MEMO TO: Principals of Selected Sites

FROM: Tomblin BJ.

SUBJECT: EFFECTIVE FACTOR STUDY

At the beginning of the year in various principal's meetings, we stated that we are planning to study two groups of minority isolated schools to find effective and ineffective factors related to achievement. The two groups are comprised of schools within the minority-isolated (1) who are doing well with respect to increasing achievement and meeting interim goals and (2) who are having difficulty raising achievement and meeting their interim goals. According to six criteria, your school was one of eleven selected to participate in this study. Results of the study will be used to strengthen programs and student achievement at all sites. I will be calling to set up an appointment with you to discuss the study and talk with you about your school and its uniqueness.

Although I respect the fact that your duties are many and your time very precious, I request that you set aside an hour to an hour and a half for discussion. Bob Raines, an outstanding Program Evaluator in the Integration and Programs Unit, will accompany me. If we can isolate changeable factors, I believe the usable information will make the time spent worthwhile.

An additional note: We will make every effort to maintain anonymity of individual schools. We are interested in finding factors common across a group of schools, not in singling out individual schools. It is our hope that with our mutual cooperation this will be a productive study.

Thank you in advance for allowing us to come to your school to better report on the unique factors at your site.

APPROVED:

Eloiza Cisneros

Eloiza Cisneros
Assistant Superintendent

Betty Tomblin
Assistant Director
Evaluation Services

EC:BT:gem
cc: Isaac, Raines

APPENDIX B

INTERVIEW WITH PRINCIPALS

STUDY OF EFFECTIVE FACTORS OF ACHIEVEMENT IN MINORITY ISOLATED SCHOOLS

1. May I have a copy of your school's daily time schedule?

2. Do you have an extended instructional day?

3. Approximately what percentage of your teachers spend instructional time over and above AGP requirements in Reading? _____ Language? _____ Math _____ Do you have a sustained silent reading program? _____ How many minutes per day? _____

4. Do you have a pullout program? If so, describe briefly.

5. What is the maximum amount of time a child could be out of class in pullout programs per day? _____ Per week? _____

6. What is your system for non-interruptions to class? How does it seem to work?

7. Do you have an after-school tutorial program? _____ If so, how long does it last? _____ Do you have peer tutoring? _____ Do you use cross-age tutoring? _____ If so, are tutors in-school or from other schools?

8. Do you have a breakfast program? _____ If so, what effect, if any, do you feel it has on student achievement?

9. Does your school participate in a Learning Center Program?

10. How often do you have assemblies?

11. Do you have a traffic patrol? _____ If so, approximately how long are students out of class each week?

12. What other programs do you have that involve students outside of the regular classroom instructional program?

    _____ Office monitors _____ Lunch workers _____ Other

13. What is the maximum aount of time a child is allowed to be out of class in these types (See #11, 12) of activities?

14. Does your school participate in the Balboa Park Program?

15. In general, do you feel your teachers are adhering to "time-on-task" instructional principles?

16. Approximately what percent of your students ride the bus?

17. Approximately how many minutes per student per week of instructional time is lost due to transportation problems?

18. Do you have a school policy relating to homework?

19. How many days per week is homework given? _____ Does this vary from teacher to teacher? _____

20. Estimate how many visitations (formal and informal) you make per class per year?

    Formal _____ Informal _____

21. How many of your teachers have aides for at least 2 hours per day? _____

22. Generally speaking, how are your classroom aides used?

    % of time in teaching activity _____

    % of time in review/reinforcement _____

    % of time in paper work/preparation of materials for teacher _____

23. Are the classroom aides given any on-site training?

    If so, describe briefly the content and length of the inservice.

24. Approximately how many hours of teacher inservice are conducted at your site per year? _____

25. How do you use your modified days?

    a. What % for inservice of staff? _____

    b. What % for routine administrative matters? _____

    c. What % for teacher preparation time? _____

26. When and how often are your staff meetings held?

27. Could I see or could you describe a typical agenda for a staff meeting?

28. Given the demands for teaching basic skills, how do your teachers manage to teach other subjects?

    How much time, for example, is given to science, art, music, physical education, etc.?

29. What external resources (e.g., university, parent tutors, business and community) do you use at your site? What effect, if any, do you feel each has had on student achievement?

    University _____

    Parent _____

    Business _____

30. What parent organizations do you have at your school? How many parents actively participate in each group?

31. Do you have a counseling center? _____

32. Briefly describe your school's educational goals. May we have a copy of your school plan?

33. How many of your students are LEP? _____

34. How many of your LEP students are on waiver? _____

35. How many changes of teacher assignments have occurred since the beginning of the school year?

36. What is your approximate average class size? _____

37. What percent of your classrooms would you characterize as:

    Traditional _____ Open _____ Multi-grade _____ Team taught _____

    Other _____

38. What is the majority/minority ratio of teachers at your school?

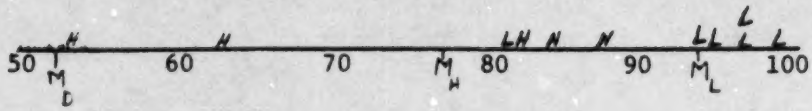
39. What else is unique to your school that might affect student achievement?

APPENDIX C

DATA BY SCHOOLS

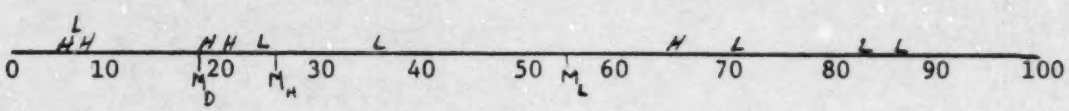
H = High
L = Low
M_H = Mean High
M_L = Mean Low
M_D = Mean District

1. Percent minority

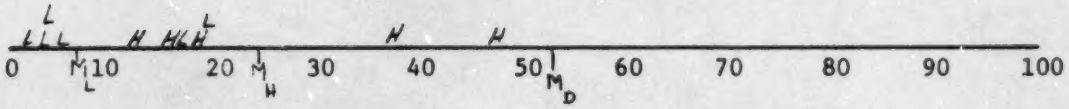


2. Percent minority composition

HISPANIC



WHITE



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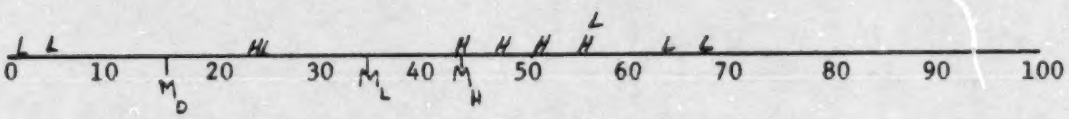
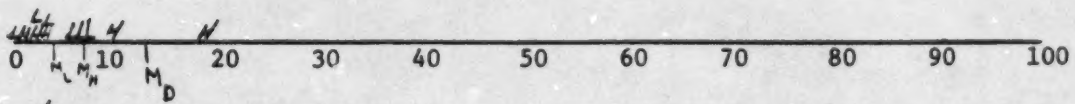
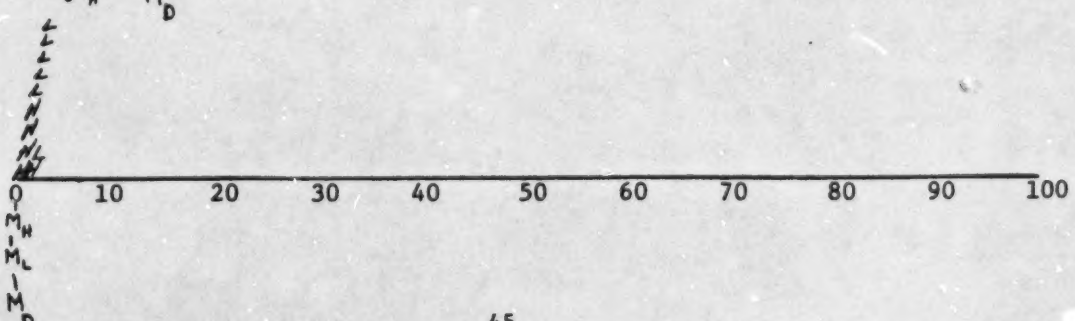


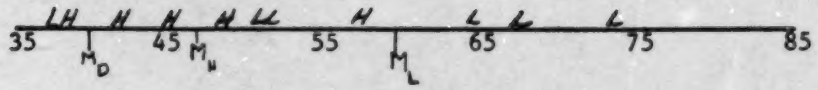
ASIAN



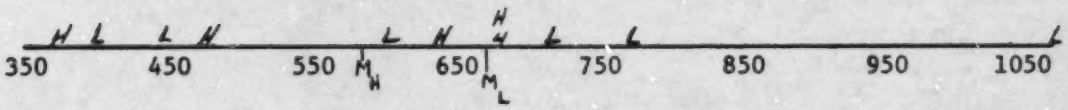
A/I



3. Mobility index



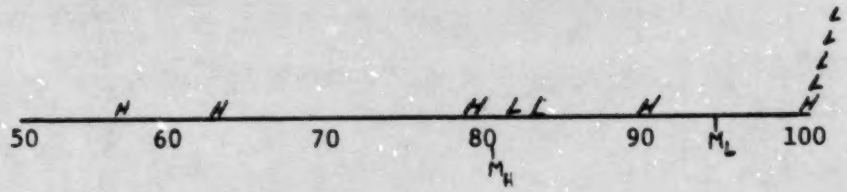
4. Enrollment (1981-1982)



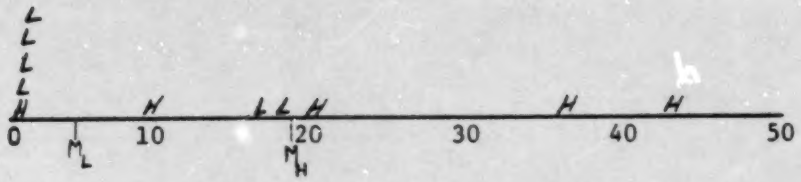
5. Programs at school

	High	Low
AGP	4/5	5/6
DISTAR	1/5	4/6
VEEP	0/5	1/6
Magnet	4/5	2/6
Title I	4/5	4/6
Learning Center	1/5	2/6
SIP	5/5	6/6
Exchange	1/5	1/6
Bilingual	2/5	1/6
Pre-Kindergarten	1/5	1/6
ESAA	4/5	3/6
Special Education	2/5	0/6
Follow Through	1/5	0/6
Gifted	1/5	2/6
Miller-Unruh	1/5	0/6

6. Percent resident



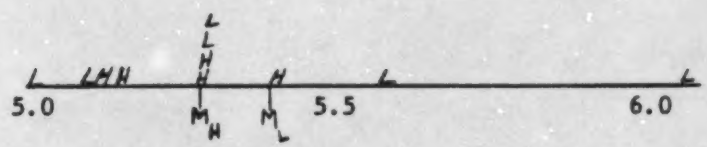
7. Percent non-resident



8. Year-round or traditional schedule

	High	Low
Year-round	0/5	4/6
Traditional	5/5	2/6

9. Total hours of instruction per school per day

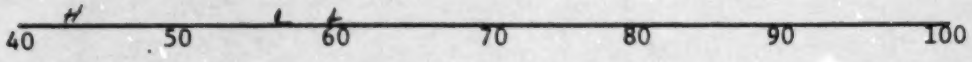


10. Extended instructional day at school

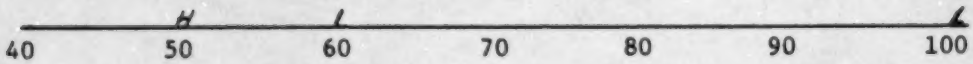
High	Low
4/5	5/6

11. Percent of teachers who spend instructional time over AGP requirements for Reading, Language, and Math (only responses by schools that teachers do spend time on reading, language, and math over and above AGP requirements are indicated)

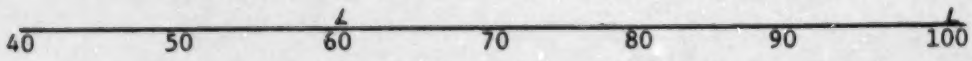
READING



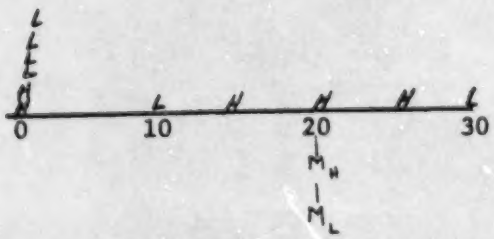
LANGUAGE



MATH



12. Minutes per day for sustained silent reading

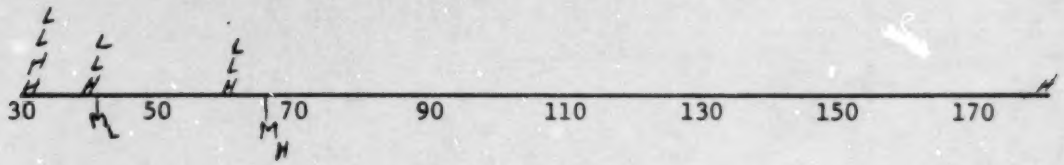


13. Pullout program at school

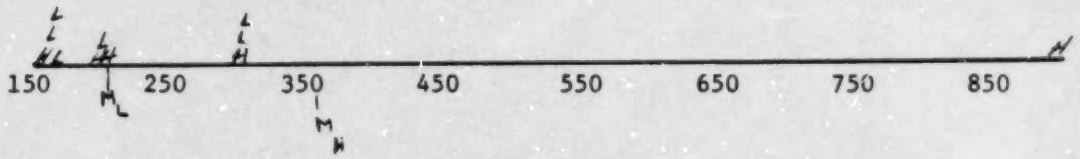
High	Low
5/5	6/6

14. Maximum amount of time (minutes) for pullout programs

Per day



Per week



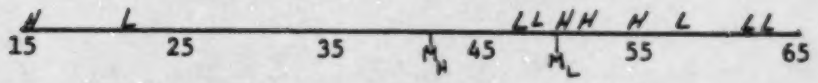
15. Non-interruptions to class policy

High	Low
5/5	5/6

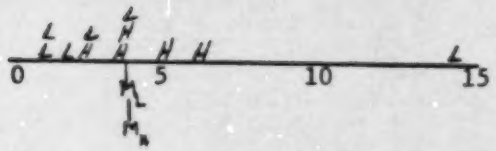
16. Tutorial programs (after school, peer tutoring, cross-age tutoring)

High	Low
0/5	0/6

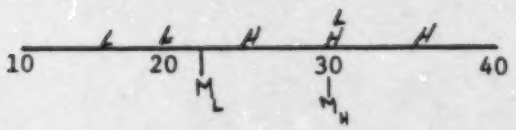
17. Percent of students participating in breakfast program



18. Frequency of assemblies (number per quarter)



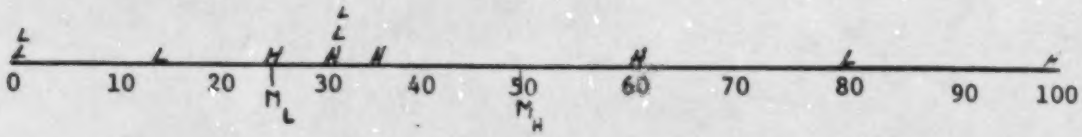
19. Traffic patrol (minutes out of class per student per week)



20. Other programs that involve students outside of regular instruction

	High	Low
Office monitor	1/5	1/6
Lunch worker	3/5	1/6
Student council	0/5	2/6
Health monitor	0/5	1/6
Playground monitor	0/5	1/6

21. Maximum amount of time out of class for Items #19 and 20 (minutes per week)



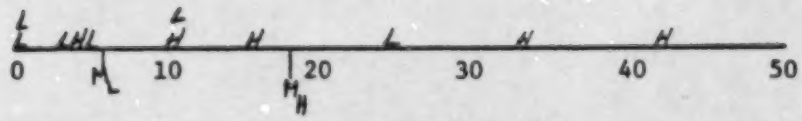
22. Balboa Park Program participation

High	Low
5/5	6/6

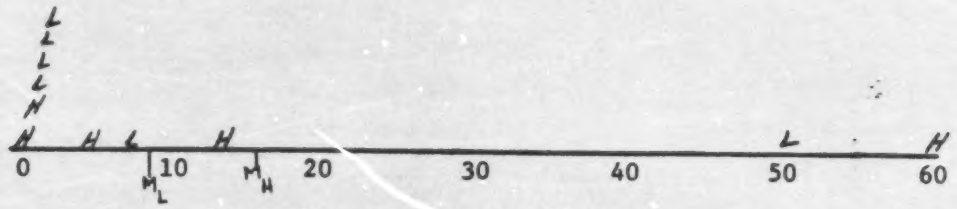
23. Adherence to "time on task" instructional principles

High	Low
5/5	6/6

24. Percent of students riding the bus



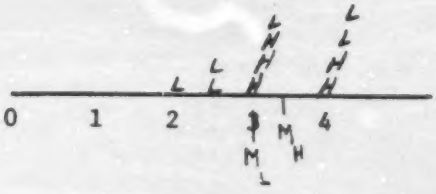
25. Minutes lost per week per student due to transportation problems



26. Policy relating to homework

	High	Low
Yes	5/5	6/6

27. Days per week for homework

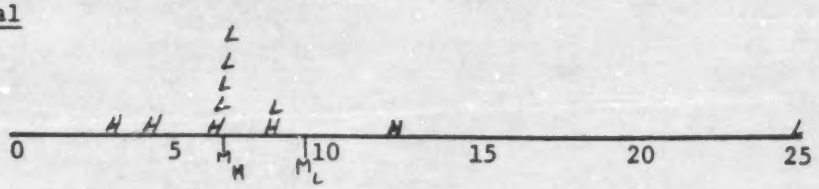


Does number of days per week that homework is given vary from teacher to teacher?

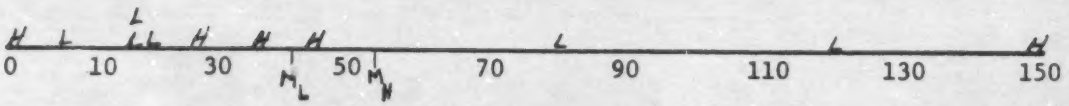
	High	Low
Yes	1/5	2/6
No	4/5	4/6

28. Number of visitations by principal to each classroom per year (formal and informal)

Formal



Informal

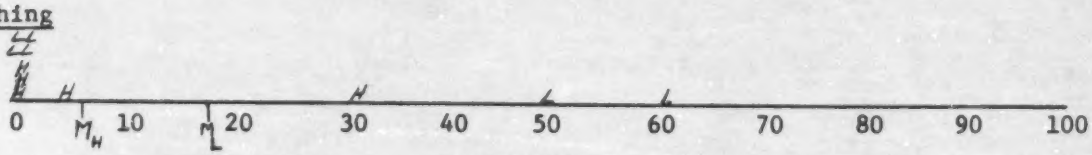


29. Percent of teachers who have aides at least two hours per day

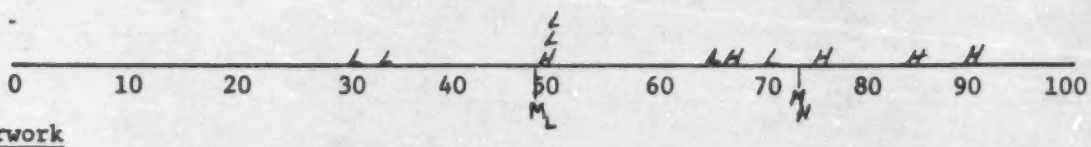
	High	Low
100%	5/5	6/6

30. Use of classroom aides (percent of time used for teaching; percent of time used for review/reinforcement; and percent of time used for paperwork/ preparation of materials)

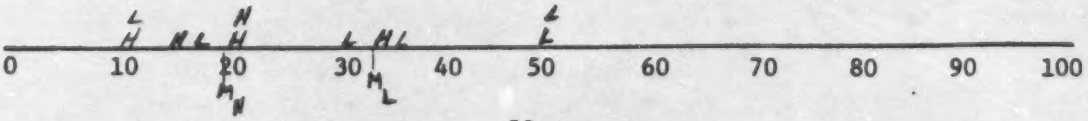
Teaching



Review



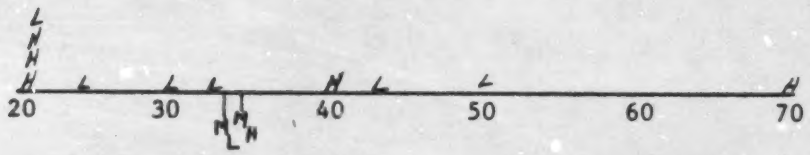
Paperwork



31. Classroom aides given on-site training (sample types of inservice)

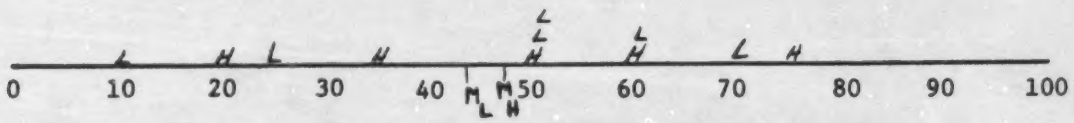
	High	Low
Resource teachers train the aides	4/5	1/6
Aides are monitored by teachers	2/5	0/6
District and school procedures	1/5	4/6
Discipline	1/5	1/6
Title I	0/5	1/6
Use of machines	0/5	2/6

32. Number of teacher inservice hours per year

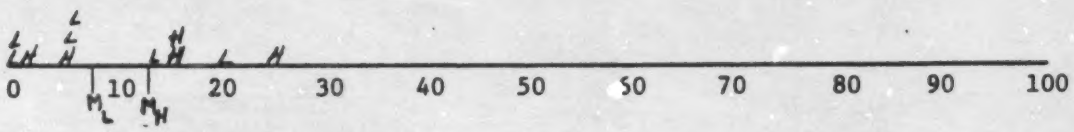


33. Use of modified days (percent for inservice, percent for administrative matters, percent for teacher preparation)

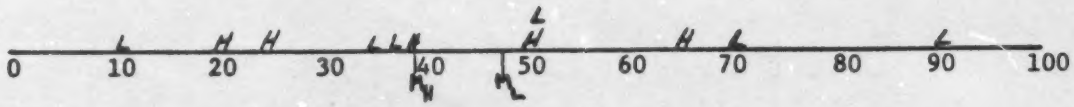
Inservice



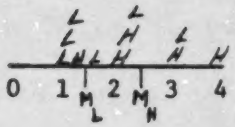
Administrative



Preparation



34. Frequency of staff meetings (number per month)



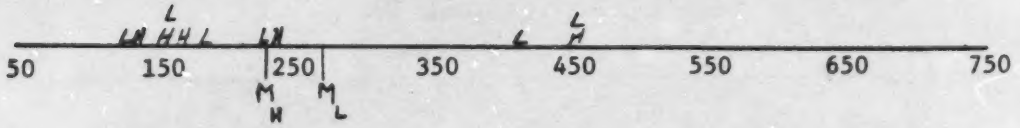
35. Agenda for staff meeting

	High	Low
	5/5	6/6

36. Given demands for teaching basic skills, how do teachers manage to teach other subjects

	High	Low
In the afternoons	5/5	3/6
Learning Center	2/5	3/6

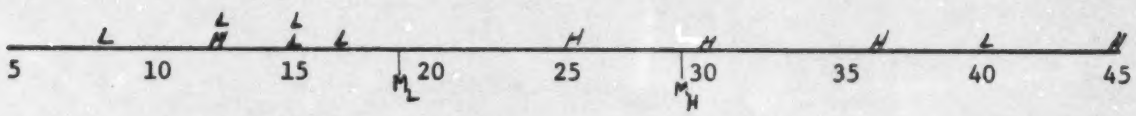
37. Minutes per week given to science, art, music, physical education, etc.



38. External resources used at school

	High	Low
University	3/5	4/6
Parent tutors	4/5	6/6
Business	0/5	1/6

39. Number of parents actively involved in parent organizations at school (SSC, SAC, PTA)



40. Counseling center

High	Low
5/5	5/6

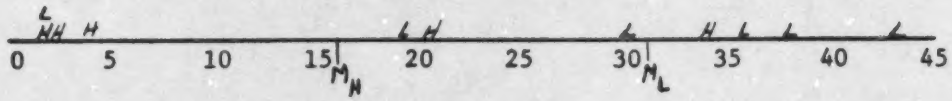
41. School's educational goals as stated by principal

	High	Low
Related to district goals	1/5	2/6
Related to basic skills	2/5	3/6

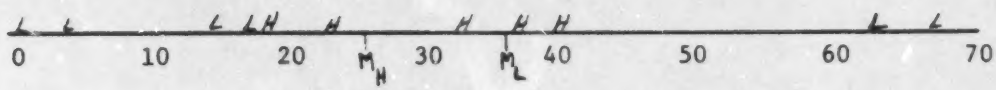
Copy of school plan provided

High	Low
4/5	5/6

42. Percent of students LEP (as reported by principal)

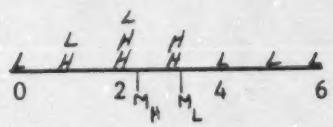


43. Percent of LEP students on waiver

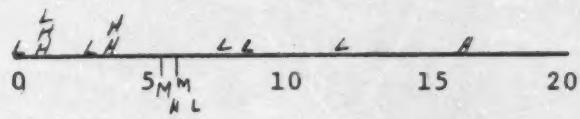


44. Number of teacher assignments changed and number of classrooms affected

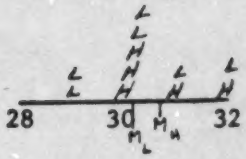
Assignments Changed



Classrooms Affected

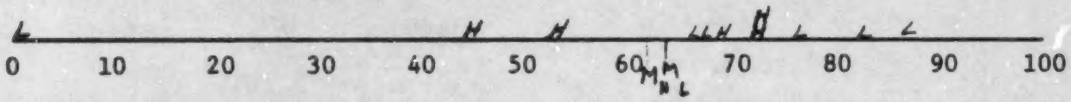


45. Average class size

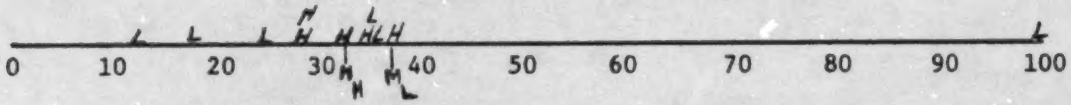


46. Percent of traditional classrooms; multi-graded classrooms; and team taught classrooms

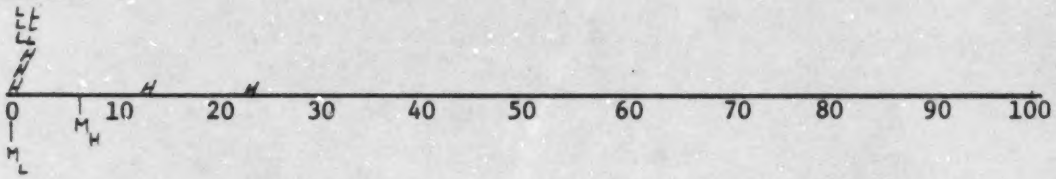
Traditional



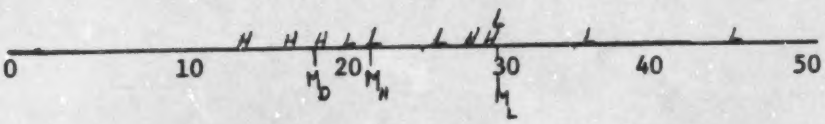
Multi-graded



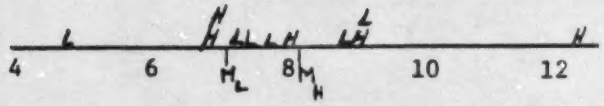
Team Taught



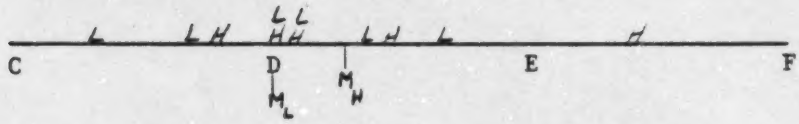
47. Percent of minority teachers



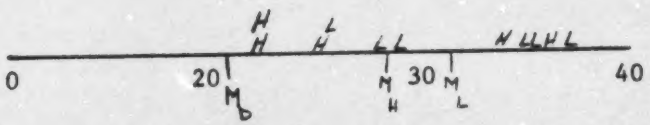
48. Mean number of years of seniority for teachers at school



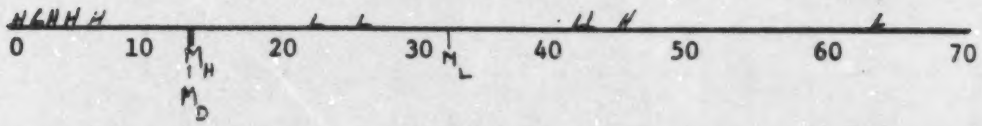
49. Mean salary classification of teachers (indicates level of education)



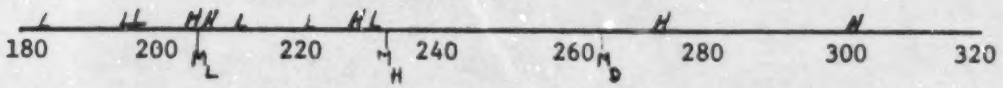
50. Percent of students who qualify for AFDC (CAP data, grade 3)



51. Percent of students LEP/NEP (CAP data, grade 3)

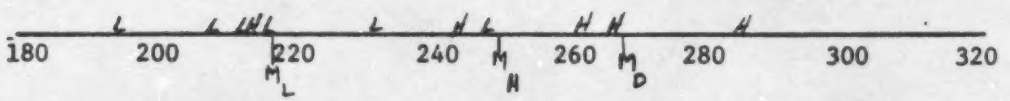


52. Scale Score - Reading (CAP data, grade 3)

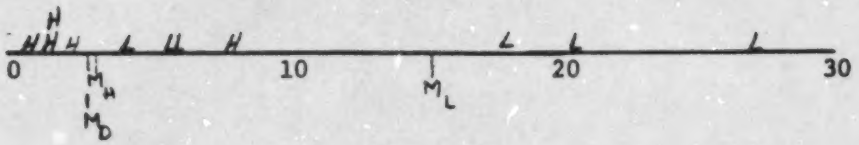


53. Scale Score - Writing (CAP data, grade 3)

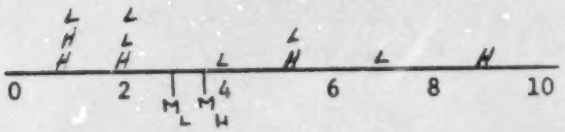
54. Scale Score - Mathematics (CAP data, grade 3)



55. Percent of students electing to leave local school for VEEP program school



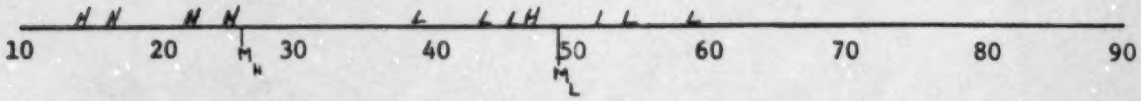
56. Number of years principal has been assigned to school site



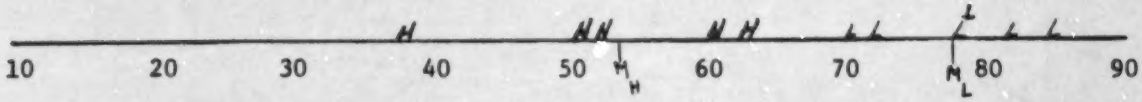
57. Percent of students scoring at or below Quartile 1 (Q1) and at or below Quartile 2 (Q2) of CTBS

Reading

≤ Q1

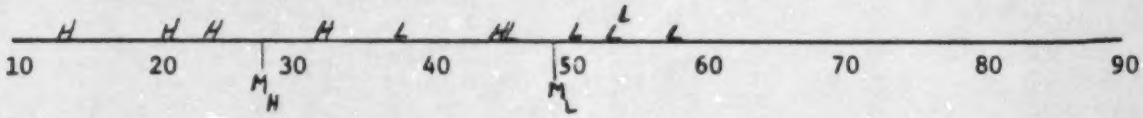


≤ Q2

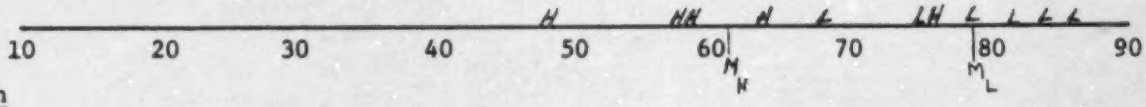


Language

≤ Q1

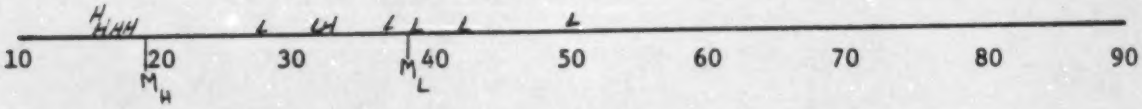


≤ Q2

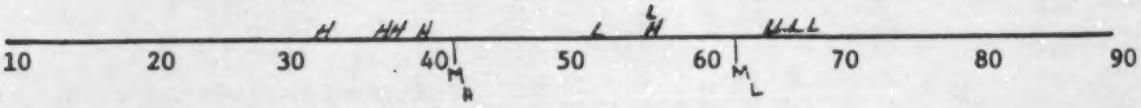


Math

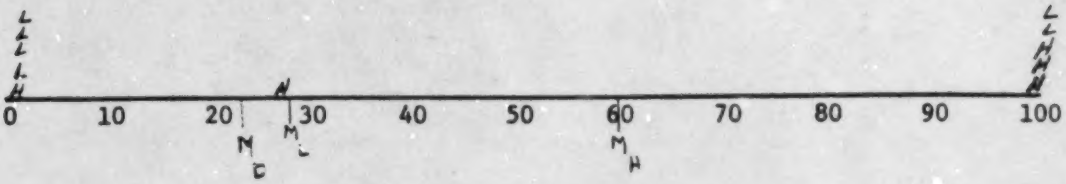
≤ Q1



≤ Q2



58. Percent of students in magnet program



APPENDIX D

Identified Areas of Weakness Across Schools
High Group
Based on Cluster Analysis of CTBS Results for Spring, 1982

The following are cluster concepts that had a quotient of .74 or less at 3 or more of the 5 schools in the high group. (A quotient of 1.00 would be the median.) Cluster concepts with a double asterisk (**) are concepts which were NOT an identified weakness at the schools in the low group.

Grade 3	**	33 E	Generalization - Future Action
		39 D	Capitalization - Geographic Name
		41 E	Punctuation - Comma, Date
	**	48 B	Adjective, Adverb - Comparative
	**	70 D	Number Theory - Even Number
	**	71 G	Problem Solving - 1 - Step, Whole Numbers
Grade 4		72 F	Measurement - Reading F Thermometer
Grade 5		33 A	Generalization - Conclusion
		35 G	Writing Techniques - Figurative/Metaphor
		35 H	Writing Techniques - Figurative/Metaphor
		35 I	Writing Techniques - Figurative/Imagery
		35 J	Writing Techniques - Figurative/Imagery
		41 G	Punctuation - Comma, Yes/No
		41 H	Punctuation - Comma, Direct Address
		44 A	Capitalization and Punctuation - End Mark, Beginning Cap
		44 D	Capitalization and Punctuation of Quote
		48 C	Adjective, Adverb - Comparative
Grade 6		40 C	Beginning Words, Titles - First Word in Quote
		41 H	Punctuation - Comma, Direct Address
		42 D	Quotation Marks - Divided Direct Quote
	**	48 C	Adjective, Adverb - Comparative

** Not an identified weakness in low schools.

Identified Areas of Weakness Across Schools
Low Group
Based on Cluster Analysis of CTBS Results for Spring, 1982

The following cluster concepts had a quotient of .74 or less at 5 or more of the 6 schools in the low group. A quotient of 1.00 would be the median. Cluster concepts with an asterisk (*) are concepts which are also an identified weakness at the schools in the high group.

Grade 1 (4 or more)		30 D	Passage Details - Where
		47 B	Verbs - Past Tense
		48 A	Adjective, Adverb - Modifier, Adjective
Grade 2		31 C	Character Analysis - Feeling
		33 G	Generalization - Conclusion
		39 C	Capitalization - Pronoun I
		40 B	Beginning Words, Titles - First Word in Sentence
		40 C	Beginning Words, Titles - First Word in Sentence
		41 G	Punctuation - Exclamation Point
		47 E	Verbs - Future Tense
Grade 3	*	39 D	Capitalization - Geographic Name
	*	41 E	Punctuation - Comma, Date
		48 E	Adjective, Adverb - Superlative
		57 G	Add Whole Numbers - Column, 3 3-digit
		72 E	Measurement - Convert in Token
		73 A	Geometry - Identify Geometry Figure, Point
Grade 4		30 B	Passage Details - When
		30 F	Passage Details - Who
		31 F	Character Analysis - Feeling
		35 B	Writing Techniques - Persuasive, Glad Names
		35 C	Writing Techniques - Figurative, Personification
		35 D	Writing Techniques - Figurative, Simile
		35 F	Writing Techniques - Figurative, Simile
		35 H	Writing Techniques - Figurative, Metaphor
		39 F	Capitalization - Holiday
		41 E	Punctuation - Exclamation Point
		41 F	Punctuation - Comma, Date
		41 G	Punctuation - Comma, Series
		42 A	Quotation Marks - Undivided Direct Quote
		42 B	Quotation Marks - Undivided Direct Quote
		42 C	Quotation Marks - Title of Short Work
		42 D	Quotation Marks - Divided Direct Quote
		44 C	Capitalization and Punctuation - End Mark, Beginning Cap
		44 F	Capitalization and Punctuation - Overuse of Punctuation Cap
		50 C	Sentence Structure - Predicate
		51 A	Sentence Recognition - Complete Sentence
		51 B	Sentence Recognition - Complete Sentence

* Also an identified weakness in high schools.

Grade 4 (Cont)	51	D	Sentence Recognition - Run-on Sentence
	52	A	Paragraph Development - Connective/Transitional
	52	C	Paragraph Development - Connective/Transitional
	52	G	Paragraph Development - Compound Subject
	52	H	Paragraph Development - Compound Subject
	53	A	Topic Sentence - Identify Topic Sentence
	53	B	Topic Sentence - Identify Topic Sentence
	53	C	Topic Sentence - Identify Topic Sentence
	53	D	Topic Sentence - Identify Topic Sentence
	53	E	Topic Sentence - Identify Topic Sentence
	54	C	Sequence - Sequence of Sentences
	54	D	Sequence - Sequence of Sentences
	71	C	Problem Solving - 2 - Step, Whole Numbers
	71	D	Problem Solving - 2 - Step, Whole Numbers
	* 72	F	Measurement - Reading F Thermometer
Grade 5	30	C	Passage Detail - When
	30	F	Passage Detail - Who
	31	C	Character Analysis - Feeling
	31	D	Character Analysis - Feeling
	31	E	Character Analysis - Trail
	* 33	A	Generalization - Conclusion
	33	G	Generalization - Conclusion
	34	B	Written Forms - Fact/Opinion
	34	D	Written Forms - Reality/Fantasy
	35	A	Writing Techniques - Persuasive, Glad Names
	35	B	Writing Techniques - Persuasive, Glad Names
	35	C	Writing Techniques - Persuasive, Testimonial
	35	D	Writing Techniques - Persuasive, Bandwagon
	35	E	Writing Techniques - Figurative, Metaphor
	35	F	Writing Techniques - Figurative, Metaphor
	* 35	G	Writing Techniques - Figurative, Metaphor
	* 35	H	Writing Techniques - Figurative, Metaphor
	* 35	I	Writing Techniques - Figurative, Imagery
	* 35	J	Writing Techniques - Figurative, Imagery
	39	B	Capitalization - Proper Adjective
	39	E	Capitalization - Geographic Name
	40	A	Beginning Words, Titles - Title of Book
	40	C	Beginning Words, Titles - 1st Word in Quote
	40	D	Beginning Words, Titles - Title of Play
	41	B	Punctuation - Comma, Series
	41	D	Punctuation - Exclamation Point
	41	F	Punctuation - Comma, Before Quote
	* 41	G	Punctuation - Comma, Yes/No
	* 41	H	Punctuation - Comma, Direct Address
	42	A	Quotation Marks - Title of Short Work
	42	B	Quotation Marks - Undivided Direct Quote

* Also an identified weakness in high schools.

Grade 5 (Cont)		42 D	Quotation Marks - Divided Direct Quote
		42 E	Quotation Marks - Divided Direct Quote
	*	44 A	Capitalization and Punctuation - End Mark, Beginning Cap
		44 B	Capitalization and Punctuation - End Mark, Beginning Cap
		44 C	Capitalization and Punctuation - Overuse of Punctuation and Cap
	*	44 D	Capitalization and Punctuation - Capitalization and Punctuation of Quote
		44 F	Capitalization and Punctuation - Letter Part
		48 B	Adjectives, Adverbs - Modifier, Adverb
	*	48 C	Adjectives, Adverbs - Comparative
		48 D	Adjectives, Adverbs - Comparative
		51 A	Sentence Structure - Incomplete Sentence
		51 D	Sentence Structure - Run-on Sentence
		52 D	Paragraph Development - Connective/Transitional
		53 A	Topic Sentence - Identify Topic Sentence
		53 B	Topic Sentence - Identify Topic Sentence
		53 D	Topic Sentence - Identify Topic Sentence
		54 B	Sequence - Sequence of Sentences
		54 D	Sequence - Sequence of Sentences
		54 E	Sequence - Sequence of Sentences
		54 F	Sequence - Sequence of Sentences
		55 C	Clarity - Nonparallel Structure
		55 D	Clarity - Nonparallel Structure
		60 B	Subtract Decimals or Fractions - 2 Decimal #'s
		68 F	Numeration - Fractional Part
		69 F	Number Sentences - Solve Inequality
		70 E	Number Theory - Equivalent Form, Fraction/Whole #
		71 H	Problem Solving - Logical Reasoning
		72 H	Measurement - Convert Yard, Feet, Inches to Inches
Grade 6		31 D	Character Analysis - Feeling
		33 A	Generalization - Conclusion
		33 J	Generalization - Cause/Effect
		35 C	Writing Techniques - Persuasive, Testimonial
		35 G	Writing Techniques - Figurative/Metaphor
		35 H	Writing Techniques - Figurative/Metaphor
		35 I	Writing Techniques - Figurative/Imagery
		35 J	Writing Techniques - Figurative/Imagery
	*	40 C	Beginning Words, Titles - 1st Word in Quote
		40 D	Beginning Words, Titles - Title of Play
		41 D	Punctuation - Exclamation Point
		41 G	Punctuation - Comma, Yes/No
	*	41 H	Punctuation - Comma; Direct Address
	*	42 D	Quotation Marks - Divided Direct Quote
		42 E	Quotation Marks - Divided Direct Quote
		44 A	Capitalization and Punctuation - End Mark, Beginning Cap

* Also an identified weakness in high schools.

Grade 6 (Cont)	48 B	Adjectives, Adverbs - Modifier, Adverb
	48 D	Adjectives, Adverbs - Comparative
	51 B	Sentence Structure - Incomplete Sentence
	51 D	Sentence Structure - Run-on Sentence
	53 F	Topic Sentence - Identify Topic Sentence
	55 E	Clarity - Verbosity/Repetition
	69 F	Number Sentences - Solve Inequality
	72 H	Measurement - Convert Yard, Feet, Inches to Inches

APPENDIX E

EFFECTIVE FACTORS STUDY

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